AMENDMENTS TO THE CLAIMS

1. (Currently amended) A composition comprising:

encapsulating devices comprising a coating[[,]] and cells,

wherein said composition has a cell density of at least about 100,000 cells/ml and wherein the coating for the encapsulating devices comprises a covalently polymerizable high density ethylenically unsaturated PEG having a molecular weight between 900 and 3,000 Daltons, and a sulfonated comonomer.

2. (Original) The composition of claim 1, wherein the encapsulating devices are microcapsules.

3. (Original) The composition of claim 2, wherein the microcapsules are conformally coated cell aggregates.

4. (Original) The composition of claim 3, wherein the cell aggregates are pancreatic islets.

5. (Original) The composition of claim 4, wherein the cell density is at least about 6,000,000 cells/ml.

6. (Original) The composition of claim 1, where the cell is selected from the group consisting of neurologic, cardiovascular, hepatic, endocrine, skin, hematopoietic, immune, neurosecretory, metabolic, systemic, and genetic.

7. (Original) The composition of claim 6, where the cell is selected from the group consisting of autologous, allogeneic, xenogeneic and genetically-modified

8. (Original) The composition of claim 7, where the endocrine cell is an insulin producing cell.

9. (Previously presented) A therapeutically effective composition comprising a plurality of encapsulating devices having an average diameter of less than 400 μm, said encapsulating devices comprising encapsulated cells in an encapsulation material, wherein the composition comprises at least about 500,000 cells/ml and wherein the encapsulation material comprises a polymerizable high density ethylenically unsaturated PEG having a molecular weight between 900 and 3,000 Daltons, and a sulfonated comonomer.

10. (Original) The therapeutically effective composition of claim 9, wherein the average diameter of the encapsulating device is less than 300 micron.

11. (Original) The therapeutically effective composition of claim 9, wherein the average diameter of the encapsulating device is less than 200 micron.

12. (Original) The therapeutically effective composition of claim 9, wherein the average diameter of the encapsulating device is less than 100 micron.

13. (Original) The therapeutically effective composition of claim 9, wherein the average diameter of the encapsulating device is less than 50 micron.

14. (Currently amended) A therapeutically effective composition comprising a plurality of encapsulating devices having an average diameter of less than 400 μm, said encapsulating devices comprising encapsulated cells in an encapsulation material, wherein the composition comprises a ratio of volume of encapsulating device to volume of cells of less than about 20:1 and wherein the encapsulation material comprises a covalently polymerizable high density

ethylenically unsaturated PEG having a molecular weight between 900 and 3,000 Daltons, and a sulfonated comonomer.

15. (Original) The therapeutically effective composition of claim 14, wherein the composition comprises a ratio of volume of encapsulating device to volume of cells of less than about 10:1.

16. (Original) The therapeutically effective composition of claim 14, wherein the composition comprises a ratio of volume of encapsulating device to volume of cells of less than about 2:1.

17. (Withdrawn) A method of using the therapeutic composition of claim 1, comprising implanting said composition into an implantation site in an animal in need of treatment for a disease or disorder.

18. (Withdrawn) The method of claim 17, where the disease or disorder is selected from the group consisting of neurologic, cardiovascular, hepatic, endocrine, skin, hematopoietic, immune, neurosecretory, metabolic, systemic, and genetic.

19. (Withdrawn) The method of claim 18, wherein the endocrine disease is diabetes.

20. (Withdrawn) The method of claim 17, wherein the animal is from an Order of Subclass Theria selected from the group consisting of Artiodactyla, Carnivora, Cetacea, Perissodactyla, Primate, Proboscides, and Lagomorpha.

21. (Withdrawn) The method of claim 20, where the primate is a Human.

22. (Withdrawn) The method of claim 17, where the implanting is an injection.

23. (Withdrawn) The method of claim 20, where the implantation site is selected from the group consisting of subcutaneous, intramuscular, intraorgan, arterial/venous vascularity of an organ, cerebro-spinal fluid, and lymphatic fluid.

24. (Withdrawn) The method of claim 23, where the implantation site is subcutaneous.

25. (Withdrawn) The method of claim 24, further comprising implanting encapsulated islets in a subcutaneous implantation site.

26. (Withdrawn) The method of claim 17, further comprising administering an immunosuppressant or anti-inflammatory agent.

27. (Withdrawn) The method of claim 26, where the immunosuppressant or anti-inflammatory agent is administered for less than 6 months.

28. (Withdrawn) The method of claim 27, where the immunosuppressant or anti-inflammatory agent is administered for less than 1 month.

29. (Withdrawn) A method of using the therapeutic composition of claim 9, comprising implanting said composition into an implantation site in an animal in need of treatment for a disease or disorder.

30. (Withdrawn) The method of claim 29, where the disease or disorder is selected from the group consisting of neurologic, cardiovascular, hepatic, endocrine, skin, hematopoietic, immune, neurosecretory, metabolic, systemic, and genetic.

31. (Withdrawn) The method of claim 30, wherein the endocrine disease is diabetes.

32. (Withdrawn) The method of claim 29, wherein the animal is from an Order of Subclass Theria selected from the group consisting of Artiodactyla, Carnivora, Cetacea, Perissodactyla, Primate, Proboscides, and Lagomorpha.

33. (Withdrawn) The method of claim 32, where the primate is a Human.

34. (Withdrawn) The method of claim 29, where the implantation is an injection.

35. (Withdrawn) The method of claim 29, where the implantation site is selected from the group consisting of subcutaneous, intramuscular, intraorgan, arterial/venous vascularity of an organ, cerebro-spinal fluid, and lymphatic fluid.

36. (Withdrawn) The method of claim 35, where the implantation site is subcutaneous.

37. (Withdrawn) The method of claim 36, further comprising implanting encapsulated islets in a subcutaneous implantation site.

38. (Withdrawn) The method of claim 29, further comprising administering an immunosuppressant or anti-inflammatory agent.

39. (Withdrawn) The method of claim 38, where the immunosuppressant or anti-inflammatory agent is administered for less than 6 months.

40. (Withdrawn) The method of claim 39, where the immunosuppressant or anti-inflammatory agent is administered for less than 1 month.

41-75. (Cancelled)

76. (Currently amended) The composition of any one of claims 1, 9, or 14, where the covalently polymerizable high density ethylenically unsaturated PEG is a high density acrylated PEG.

77. (Original) The composition of claim 76, where the polymerizable high density acrylated PEG has a molecular weight of 1.1 kD.

78. (Previously presented) The composition of any one of claims 1, 9, or 14, where the sulfonated comonomer is selected from the group consisting of 2-acrylamido-2-methyl-1-propanesulfonic acid, vinylsulfonic acid, 4-styrenesulfonic acid, 3-sulfopropyl acrylate, 3-sulfopropyl methacrylate, and n-vinyl maleimide sulfonate.

79. (Original) The composition of claim 78, where the sulfonated comonomer is 2-acrylamido-2-methyl-1-propanesulfonic acid.

80. (Previously presented) The composition of any one of claims 1, 9, or 14, further comprising a cocatalyst selected from the group consisting of triethanolamine, triethylamine, ethanolamine, N-methyl diethanolamine, N,N-dimethyl benzylamine, dibenzyl amino, N-benzyl ethanolamine, N-isopropyl benzylamine, tetramethyl ethylenediamine, potassium persulfate, tetramethyl ethylenediamine, lysine, ornithine, histidine and arginine.

81. (Original) The composition of claim 80, where the cocatalyst is triethanolamine.

82. (Previously presented) The composition of any one of claims 1, 9, or 14, further comprising an accelerator selected from the group consisting of N-vinyl pyrrolidinone, 2-vinyl pyridine, 1-vinyl imidazole, 9-vinyl carbazone, 9-vinyl carbozol, acrylic acid, n-vinylcarpolactam, 2-allyl-2-methyl-1,3-cyclopentane dione, and 2-hydroxyethyl acrylate.

83. (Original) The composition of claim 82, where the accelerator is N-vinyl pyrrolidinone.

84-97. (Cancelled)

98. (Currently amended) A composition comprising encapsulating devices with a covalently linked polyethylene glycol (PEG) coating having a molecular weight between 900 and 3,000 Daltons, wherein said composition has a cell density of at least about 6,000,000 cells/ml.

99. (Previously presented) The composition of claim 98, wherein the encapsulating devices are microcapsules.

100. (Previously presented) The composition of claim 99, wherein the microcapsules are conformally coated cell aggregates.

101. (Previously presented) The composition of claim 100, wherein the cell aggregates are pancreatic islets.

102. (Previously presented) The composition of claim 98, where the cell is selected from the group consisting of neurologic, cardiovascular, hepatic, endocrine, skin, hematopoietic, immune, neurosecretory, metabolic, systemic, and genetic.

103. (Previously presented) The composition of claim 102, where the cell is selected from the group consisting of autologous, allogeneic, xenogeneic and genetically-modified.

104. (Previously presented) The composition of claim 103, where the endocrine cell is an insulin producing cell.

105. (Previously presented) A therapeutically effective composition comprising a plurality of encapsulating devices having an average diameter of less than 400 μm, said encapsulating devices comprising encapsulated cells in an encapsulation material, wherein a cell density is at least about 6,000,000 cells/ml.

106. (Previously presented) The therapeutically effective composition of claim 105, wherein the average diameter of the encapsulating device is less than 300 micron.

107. (Previously presented) The therapeutically effective composition of claim 105, wherein the average diameter of the encapsulating device is less than 200 micron.

108. (Previously presented) The therapeutically effective composition of claim 105, wherein the average diameter of the encapsulating device is less than 100 micron.

109. (Previously presented) The therapeutically effective composition of claim 105, wherein the average diameter of the encapsulating device is less than 50 micron.